

REMARKS/ARGUMENTS

Claims 1-7 and 9-22, and 28-37 are pending in the present Application. Applicant has amended claims 9, 22, 29, 31, 33, 35, and 37. Applicant has also added claims 38-42. Consequently, claims 1-7, 9-22, and 28-42 remain pending in the present Application.

Applicant has amended claims 9 and 22 to correct a minor error. Applicant has also added claims 38-42, which recite that the aperture size is adjusted to shorten the focus zone **only** if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus. Support for the new claims can be found in Figure 7 of the present application, items 718, 724, and 728. Accordingly, Applicant respectfully submits that no new matter is added.

In the above-identified Office Action, the Examiner objected to claims 9 and 22 because of the term “the at least one criteria.” In accordance with the Examiner’s suggestion, Applicant has removed the term “the” before the phrase “at least one criteria.” Accordingly, Applicant respectfully submits that the Examiner’s objection has been overcome.

In the above-identified Office Action, the Examiner rejected claims 29, 31, 33, 35, and 37 under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has canceled claims 29, 31, 33, 35, and 37. Accordingly, Applicant respectfully submits that the Examiner’s rejection under 35 U.S.C. § 112 is moot.

In the above-identified Office Action, the Examiner rejected claims 1-2, 4-7, 10-11, 13-21, 28-29, and 32-35 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,067,114 (“Omata”) in view of U.S. Patent No. 4,826,301 (“Ikemori”) in further view of U.S.

Patent No. 4,825,235 ("Wakabayashi"). The Examiner also rejected claims 3 and 12 under 35 U.S.C. § 103 as being unpatentable over Omata in view of Ikemori and Wakabayashi in further view of U.S. Patent No. 5,825,016 ("Nagahata"). The Examiner also rejected claims 9, 22, 30-31, 36, and 37 under 35 U.S.C. § 103 as being unpatentable over Omata, Ikemori, Nagahata, and Wakabayashi.

In the above-identified Office Action, the Examiner rejected claims 1-2, 4-7, 10-11, 13-21, 28-29, and 32-35 under 35 U.S.C. § 103 as being unpatentable over Omata in view of Ikemori in further view of Wakabayashi. In response to Applicant's arguments, the Examiner stated:

Applicant further argues that Wakabayashi does not teach or suggest setting the aperture size without shifting the focus zone after the focus zone has been shifted if it is determined that the focus zone can be shifted so that the at least one object is out of focus, and adjusting the aperture size to shorten the focus zone if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus. Examiner respectfully disagrees with this assessment of the reference. Examiner relies on the combination of Omata, Ikemori and Wakabayashi to teach these features, not Wakabayashi alone. The combination of Omata and Ikemori teach, as discussed above, determining whether the focus zone can be shifted so that the at least one object is out of focus and shifting the focus zone accordingly. If shifting the focus zone alone is not sufficient for the at least one object to be out of focus, one skilled in the art would know to incorporate the features of Wakabayashi, which teach setting the aperture size after the soft focus operation has been performed and adjusting the aperture size to shorten the focus zone to *"improve the soft-tone effect."* Wakabayashi, col. 18, line 38-48.

Applicant respectfully disagrees with the Examiner's rejection. Independent claims 1, 10 and 19 recite a method, system and computer-readable medium for capturing an image. In the method, system, and computer-readable medium of claim 1, 10 and 19, it is determined whether the focus zone can be shifted so that the at least one object is out of focus. If the focus zone can be so shifted, then the focus zone is shifted so that the object is out of focus. Claims 1, 10 and 19 also recite that the aperture size is set without shifting the focus zone after the focus zone has been shifted if it is determined that the focus zone can be shifted so

that the at least one object is out of focus. Claims 1, 10, and 19 also recite that the aperture size is adjusted to shorten the focus zone if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus. Thus, if shifting the focus zone is sufficient to ensure that the object is out of focus, then the aperture is set in a manner to preserve the shift. Consequently, the ability of the digital imaging device to provide a soft focus is improved.

For the reasons previously discussed, Applicant respectfully disagrees the Omata in view of Ikemori and Wakabayashi teach or suggest determining whether the focus zone can be shifted so that at least one object is sufficiently out of focus and, if so, shifting the focus zone. Even if it is assumed for the purposes of argument that Omata in view of Ikemori and Wakabayashi teach or suggest shifting the focus zone if it is determined that the focus zone can be shifted sot that at least one object is sufficiently out of focus, the combination still fails to teach or suggest the method, image capture device and computer readable medium recited in claims 1, 10 and 19. In particular, the combination fails to teach or suggest setting the aperture size without shifting the focus zone after the focus zone has been shifted and if it has been determined that the focus zone can be shifted so that the at least one object is out of focus.

Applicant has found no mention in either Omata or Ikemori of setting the aperture size without shifting the focus zone after the focus zone has been shifted and if it has been determined that the focus zone can be shifted so that the at least one object is out of focus. Furthermore, Omata in view of Ikemori fails to teach or suggest adjusting the aperture size to shorten the focus zone if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus.

Wakabayashi also fails to teach or suggest at least setting the aperture size without

shifting the focus zone after the focus zone has been shifted and if it has been determined that the focus zone can be shifted so that the at least one object is out of focus. The cited portion of Wakabayashi describes setting the aperture value “to be small (the aperture opening is large) to improve the soft-tone effect **by** decreasing the depth of field.” Wakabayashi, col. 18, lines 46-48 (emphasis added). Thus, Wakabayashi describes setting the aperture value in order to decrease the depth of field. One of ordinary skill in the art will readily understand that the depth of field corresponds to the focus zone. See, www.dpreview.com/learn/Glossary/Optical/Depth_of_field01.htm, for example. Consequently, Wakabayashi describes utilizing the aperture size to control the size of the focus zone. However, the cited portion of Wakabayashi fails to mention shifting (or not shifting) the focus zone. More specifically, the cited portion of Wakabayashi fails to describe setting the aperture size such that the focus zone is not shifted. Consequently, Wakabayashi fails to teach or suggest setting the aperture size without shifting the focus zone after the focus zone has been shifted if it is determined that the focus zone can be shifted so that the at least one object is out of focus.

Because the cited portions of Omata, Ikemori, and Wakabayashi are each devoid of reference to setting the aperture size without shifting the focus zone after the focus zone has been shifted and if it has been determined that the focus zone can be shifted so that the at least one object is out of focus, the combination also fails to teach or suggest this feature. Stated differently, if the teachings of Ikemori and Wakabayashi are added to those of Omata, the combination might initially focus and track the image using the system of Omata. The combination could also provide a soft focus by moving the lens of Ikemori to introduce spherical aberrations. The combination might also compensate for the shift in the focus zone

introduced by the lens movement by refocusing, as in the teachings of Ikemori. Finally, the combination might change the aperture size to decrease the depth of field and improve the “tone” of the image. However, the combination would not set the aperture size without shifting the focus zone after the focus zone has been shifted and if it has been determined that the focus zone can be shifted so that the at least one object is out of focus. Consequently, Omata in view of Ikemori in view of Wakabayashi fail to teach or suggest the method, image capture device and computer-readable medium recited in claims 1, 10, and 19. Accordingly, Applicant respectfully submits that claims 1, 10 and 19 are allowable over the cited references.

Claims 2, 4-7, and 28 depend upon independent claim 1. Claims 11, 13-18, and 32 depend upon independent claim 10. Claim 20-21 and 34 depend upon independent claim 19. Consequently, the arguments herein apply with full force to claims 2, 4-7, 11, 13-18, 20-21, 28, 32, and 34. Accordingly, Applicant respectfully submits that claims 2, 4-7, 11, 13-18, 20-21, 28, 32, and 34 are allowable over the cited references.

The Examiner also rejected claims 3 and 12 under 35 U.S.C. § 103 as being unpatentable over Omata in view of Ikemori and Wakabayashi in further view of Nagahata.

Applicant respectfully disagrees with the Examiner’s rejection. Claim 3 and 12 depend upon independent claims 1 and 10, respectively. Consequently, the arguments herein apply with full force to claim 3 and 12. In particular, Omata in view of Ikemori and Wakabayashi fail to teach or suggest adjusting the aperture size without shifting the focus zone if the desired soft focus can be achieved with a focus zone shift alone.

Nagahata fails to remedy the defects of Omata in view of Ikemori and Wakabayashi. The cited portions of Nagahata do describe a foreground and a background, with objects in

the foreground being closer. However, Applicant can find no mention in Nagahata of adjusting the aperture size without shifting the focus zone if the desired soft focus can be achieved with a focus zone shift alone. Instead, Nagahata describes determining to which region an object in the image belongs. Consequently, if the teachings of Nagahata are added to those of Omata and Ikemori, the combination might characterize certain objects as being in the foreground and others as being in the background. However, the combination would still fail to adjust the aperture size without shifting the focus zone if the desired soft focus can be achieved with a focus zone shift alone. Consequently, Omata in view of Ikemori and Wakabayashi in further view of Nagahata fail to teach or suggest the method and image capture device recited in claims 1 and 10.

The Examiner also rejected claims 9, 22, 30-31, 36, and 37 under 35 U.S.C. § 103 as being unpatentable over Omata, Ikemori, Nagahata, and Wakabayashi.

Applicant respectfully disagrees with the Examiner's rejection. Claims 9 and 22 recite a method and computer-readable medium, respectively, including a program having the steps of adjusting the aperture size without shifting the focus zone if the desired soft focus can be achieved with a focus zone shift alone. The arguments herein thus apply with full force to claims 9 and 22. Consequently, Omata in view of Ikemori and Wakabayashi in further view of Nagahata fails to teach or suggest the method and computer-readable medium recited in claim 9 and 22. Accordingly, Applicant respectfully submits that claims 9 and 22 are allowable over the cited references.

Claims 30 and 36 depend upon independent claims 9 and 22, respectively. Consequently, the arguments herein apply with full force to claims 30 and 36. Accordingly, Applicant respectfully submits that claims 30 and 36 are allowable over the cited references.

Applicant has also added claims 38-42. Applicant respectfully submits that claims 38-42 are allowable as presented. Claims 38, 39, 40, 41, and 42 depend upon claims 1, 9, 10, 19, and 22, respectively. Consequently, the arguments herein apply with full force to claims 38, 39, 40, 41, and 42. Accordingly, Applicant respectfully submits that claims 28-42 are allowable over the cited references.

Claims 38-42 are also separately allowable over the cited references. Claims 38-42 recite methods, an image capture device, and computer readable medium in which the aperture size is adjusted to shorten the focus zone **only** if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus. Applicant has found no mention in the cited portions of Omata, Ikemori, and Nagahata of adjusting the aperture size to shorten the focus zone. Although Wakabayashi does adjust the aperture size to decrease the depth of field (shorten the focus zone), Wakabayashi apparently does so each time the insertion of a soft focus filter is detected. Wakabayashi, col. 18, lines 38-48. Consequently, Wakabayashi appears to set the aperture size to decrease the depth of field any time that a soft focus image is to be captured. The cited portion of Wakabayashi fails to describe determining whether the focus zone can be shifted enough such that certain object(s) are out of focus. The cited portion of Wakabayashi is also devoid of mention of adjusting the aperture size to shorten the focus zone **only** if it is determined that shifting the focus zone alone is not sufficient for the at least one object to be out of focus. Consequently, Wakabayashi does not remedy the defects of Omata, Ikemori and Nagahata. The combination of Omata, Ikemori, Wakabayashi and Nagahata thus fail to teach or suggest the methods, image capture device, and computer-readable media recited in claims 38-42. Accordingly, Applicant respectfully submits that claims 38-42 are separately allowable over the cited references.

Accordingly, for the above-mentioned reasons, Applicant respectfully submits that the claims are allowable over the cited reference. Consequently, Applicant respectfully requests reconsideration and allowance of the claims as currently presented.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issue remain, the Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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